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Purchase Price Allocations for Solar Energy Systems for Financial Reporting Purposes

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Solar Energy Industries Association

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Introduction

As the solar energy industry continues to evolve, industry participants are increasingly involved in mergers and acquisitions involving solar projects. Some acquired projects are in development, while others are acquired at or following commissioning. These transactions often require purchase price allocations for financial reporting and/or income tax reporting.

A purchase price allocation is a process of allocating the value of the consideration paid and liabilities assumed among the assets purchased. It is important to note that purchase price allocations for financial reporting and income tax purposes are subject to completely different rules and guidance – and will often differ substantially. This paper's focus is financial reporting, not income tax reporting.

Proper reporting of purchase price allocations for financial reporting purposes is important to record depreciation and amortization of the assets and to establish appropriate basis for future impairment testing. This white paper is intended to provide an overview of best practices in performing purchase price allocations for typical solar energy projects.

Overall Principle: Change in Control Results in Purchase Price Allocation

Accounting Standards Codification ("ASC") 805 and International Financial Reporting Standards ("IFRS") 3 reflect the overall principle that when an identified accounting acquirer obtains control of another entity or its assets, the fair value of the transaction and underlying assets and liabilities assumed should be used to establish a new accounting basis. Following the change of control, the identified accounting acquirer recognizes the assets acquired and liabilities assumed at their full fair value on the date control is obtained, regardless of the percentage ownership acquired or how control was obtained.

TIP: The identified accounting acquirer is the entity that will be responsible for the financial reporting of the acquisition. This may be a different entity from the legal acquirer or the entity identified as the acquirer for tax purposes.

A change of control can occur without the exchange of consideration or even without the acquirer holding any ownership interest. An acquirer might obtain control in a variety of ways including, but not limited to, any of the following:

- Transferring cash, cash equivalents, or other assets (including net assets that constitute a business);
- Issuing equity interests;
- Providing more than one type of consideration;
- Without transferring consideration, including by contract alone;
- Lapse of minority veto rights that previously kept acquirer holding majority voting interest from controlling;
- Change in existing contracts (e.g., operating and maintenance agreement);
- Acquiree repurchasing a sufficient number of its shares for an existing investor to obtain control;
 or.
- By holding on to minority investment and making an additional investment resulting in control.

Just as change of control is the trigger for application on ASC 805, certain transactions including the formation of a joint venture and transactions between entities or businesses under common control are precluded from

establishing a new basis of accounting and are required to use carryover basis. Accordingly, any transactions involving common equity owners, offerers or other substantial contractual relationships require a careful analysis and judgment to conclude whether it is a change of control or common control transaction.

Definition of Value: Fair Value

For financial reporting purposes including purchase price allocations, value is measured using the definition provided in ASC 820/IFRS 3, Fair Value Measurement.

Fair value is defined in ASC 820 and IFRS 3 as:

"the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date."

Fair value is the price to sell an asset or transfer liability and therefore represents an exit price. It is a market-based measurement, and as such, is estimated based on assumptions market participants would consider in pricing the asset or liability.

Accounting as a Business Combination or Acquisition of Asset(s)

A critical step in performing the purchase price allocation for financial reporting purposes is determining whether the acquisition transaction is a business combination or acquisition of assets. Under ASC 805 and IFRS 3, an acquisition transaction is accounted for as a business combination if the acquired assets constitute a business. For assets that do not constitute a business, the rules of ASC 805 and IFRS 3 do not apply and the transaction is accounted for as an acquisition of assets under different rules. Additionally, the treatment of transaction costs in asset acquisitions differs from the treatment in a business combination.

In an asset acquisition, transaction costs are capitalized in the basis of the assets acquired; however, in a business combination, transaction costs are required to be expensed. Furthermore, goodwill is not recognized in an acquisition of assets, and other differences between reporting a business combination versus acquisition of assets are described in Table 1 below.

Under ASC 805 and IFRS 3, a business is defined as:

"An integrated set of activities and assets that is capable of being conducted and managed for the purpose of providing a return in the form of dividends, lower costs, or other economic benefits directly to the acquirer or other owner, other members or participants."

This definition is intended to be broad and may require a good deal of professional judgment in differentiating a business from assets. A business usually consists of inputs, processes and outputs; however, outputs are not required for an integrated set of assets to qualify as a business. Furthermore, even if elements of inputs and processes are missing but they can be readily added by an acquirer (whether directly or through purchase from third parties), the integrated set may qualify as a business.

Acquisitions of a project or projects generating power would be considered business combinations as would acquisitions of an entity or business assets that included the ability to generate revenue. On the other hand, acquisition of just development rights (e.g., land control, permits/approvals, interconnection agreement) prior to construction may or may not be considered a business combination. A number of objective and subjective considerations must be evaluated to determine whether the development rights and other assets acquired

constitute a business or should be more appropriately treated as an acquisition of assets. Among those considerations are:

- Stage of or status of financing;
- Status of required permits (none, some, or all obtained);
- Probability of assured future revenue source (power purchase agreement finalized, in negotiation, or no specific offtaker identified);
- · Status of construction contracting, or asset construction; and,
- Status of plans regarding post-commissioning operating and maintenance activities.

Accordingly, a careful analysis of all of the relevant facts and circumstances to a particular transaction must be performed to reach the proper conclusions as to whether a transaction represents a business combination or an asset acquisition.

Can Multiple Systems Acquired Be Aggregated?

In the case where multiple businesses or solar generation systems were acquired, there is a requirement to analyze aggregation criteria to determine whether or not to aggregate the systems for financial reporting purposes. To the extent there are similarities between major inputs such as the state/locality, offtaker, lengths of power purchase contracts, incentives, and install costs, multiple systems can generally be treated as one system for purchase price allocation. An important consideration is whether it is likely the systems would be disposed of separately, and if so, it is likely that separate purchase price allocations should be performed.

Application of Purchase Price Allocation to a Business Combination

Applying this method requires:

- Identifying the acquirer;
- Determining the acquisition date;
- Determining the fair value of consideration;
- Identifying the tangible and intangible assets that must be reported separately;
- Recognizing at the acquisition date the fair values of the tangible and intangible identifiable assets acquired; and,
- Recognizing goodwill or, in the case of a bargain purchase, a gain.

Fair Value of Consideration

The next step in a purchase price allocation is the analysis of the transaction in terms of consideration given. The consideration paid must be measured at fair value. Total consideration under ASC 805 includes:

- Cash paid;
- Liabilities and debt adjusted to fair value;
- Equity issued by the acquirer and non-controlling interests retained by the seller at fair value since purchase accounting requires a valuation of 100% of the acquired business;
- Notes payable issued by the acquirer at fair value; and,
- Contingent consideration.

Contingent consideration is any additional obligation relative to performance that may exist for the acquirer after the date of change in control. The fair value of the obligation is estimated according to the probability of

various outcomes actually occurring as of the change of control date and subsequently adjusted to fair value on each reporting date.

Identifying Tangible and Intangible Assets to Report Separately

All identified tangible assets, as well as identified intangible assets that meet the contractual-legal criterion or separability criterion for reporting separate from goodwill, are recorded. As stated in ASC 805:

"An intangible asset is identifiable if it meets either the separability criterion or the contractual-legal criterion (arises from contractual or other legal rights). An intangible asset that meets the contractual-legal criterion is identifiable even if the asset is not transferable or separable from the acquiree or from other rights and obligations.

The separability criterion means that an acquired intangible asset is capable of being separated or divided from the acquiree and sold, transferred, licensed, rented, or exchanged either individually or together with a related contract, identifiable asset, or liability. An intangible asset that the acquirer would be able to sell, license, or otherwise exchange for something else of value meets the separability criterion even if the acquirer does not intend to sell, license, or otherwise exchange it."

Valuation of Tangible Assets

Given the nature of the solar generation assets being very fixed asset intensive, it follows that a significant portion of the fair value of solar photovoltaic ("PV") systems is allocated to tangible assets. The approaches to value commonly used to arrive at fair value for tangible assets are the cost approach and market approach.

Tangible assets would typically include solar PV panels, inverters, racking components, and monitoring equipment.

Cost Approach:

The cost approach starts with the current reproduction cost or replacement cost new of the tangible assets and the depreciation for the loss in value caused by physical depreciation, functional obsolescence, and economic obsolescence. The logic behind the approach is the principle of substitution; a prudent buyer will not pay more for an asset than the cost of acquiring a substitute asset of equivalent utility. Once the replacement cost new has been determined, the following three forms of depreciation are considered:

- **Physical depreciation** is the depreciation of tangible assets from normal wear and tear and exposure to the elements. Physical depreciation is quantified using an age/life ratio arriving at the percent depreciation. For example, if the normal useful life of a solar PV panel is 30 years and the panel is 15 years old, the age/life ratio provides a depreciation rate of 50 percent (15/30=50%).
- Functional obsolescence is a depreciation factor based on inefficiencies inherent within the machinery and equipment assets which may or may not include changes in technology within the industry. For example, market leaders are aware that the cost of solar PV systems are decreasing and the efficiency rates are increasing. This decrease in cost and increase in efficiency will have an effect on the fair value of older tangible assets.
- Economic obsolescence relates to exterior factors that can affect the depreciation rate of tangible assets. Examples of external factors could be changes in legislation which can affect the

generation of energy, the loss of a power purchase agreement ("PPA"), or increased cost of labor.

After considering the three forms of depreciation and applying all three (or a combination thereof), if applicable, the value of the tangible assets can be estimated.

TIP: The actual costs incurred related to the development of certain intangible assets, including PPAs or "other" intangible assets, may serve as a proxy for fair value if other market participants would incur similar costs to develop those assets.

Income Approach:

Valuation methods based on the income approach use the expected economic earnings capacity of the solar asset in question to estimate value, which captures the specific contracts and incentives applicable to the solar asset. The income approach is generally developed using the discounted cash flow ("DCF") method. The DCF method is based on the fundamental financial premise that the value of any investment is the present value of expected future economic benefits. The DCF method considers all of the relevant factors an investor would consider in determining value (i.e., economic benefits, risk, and the liquidation time horizon).

In applying the DCF method, the economic benefit stream over the projection period is converted to present value at a discount rate which meets the return requirements of debt and equity investors (i.e., the weighted average cost of capital). A projection of economic benefits (after tax cash flows including tax benefits) covering the expected life of the tangible assets is utilized because the timing of significant benefits such as depreciation and state and local incentives varies from year to year.

Market Approach:

The market approach (also known as a sales comparison approach) focuses on the actions of actual buyers and sellers. This approach involves the comparison of recent sales of similar assets to the subject tangible assets. If the comparable sales are not exactly like the subject asset, adjustments must be made to the price of the comparable sale to make the comparables reflect the subject tangible assets. These adjustments can be up or down in order to estimate what the comparable assets would have sold for if it had the same characteristics as the subject tangible assets. In theory, the market approach measures the loss in value from all forms of depreciation.

TIP: Increased expenditures on a project do not necessarily imply fair value increases, so professional skepticism should be used when estimating the fair value of project-related intangibles under any valuation method.

Valuation of Intangible Assets

Typical intangible assets include PPAs; contracts for sales of solar renewable energy certificates; engineering, procurement, and construction ("EPC") contracts; interconnection agreements; environmental and other permitting; and site control including options, easements, and leases.

There are several methods generally utilized to value the intangible assets, which can be grouped into three broad approaches:

- Cost
- Income

Market

As a customer relationship asset, the PPA may be valued using the multi-period excess earnings method ("MPEEM"). Under the MPEEM, cash flows generated by the PPA are considered in light of the other assets required to generate those cash flows, including the fixed assets and other intangibles. For each contributory asset, an economic charge is applied which represents a rent that would be paid in the event the asset were not owned by the acquirer. The resulting excess earnings are subsequently discounted to estimate the fair value of the PPA asset. The MPEEM can sometimes be difficult to implement in practice due to the iterative nature of the charges applied from the other intangible assets.

The alternative approach is a hybrid of the cost and income approaches and considers the fair value of the "in place" intangible asset equal to the costs incurred to obtain a similar asset, including opportunity cost. The "above/below market value" of the contract, when compared to a similar contract at market, would be valued using an income approach.

A developer generally requires various other permits, approvals, resource studies, site control, and interconnection agreements as part of a solar project. Given the difficulty of separating the developer's activities between the procurement of these various assets, it is difficult to separately identify and value these assets individually. Therefore, these assets are typically lumped together as "other" project rights and assets. To the extent there is market data regarding transactions of similar project rights, that data could be used in estimating the fair value of those assets. The replacement cost new method can also be used if the expenditures related to the other assets can be separately identified and reasonably approximate fair value.

Generally, though, there is insufficient market data to utilize a market method, and the expenditures for the project are difficult to segregate between securing the EPC contract, interconnection, other permitting, etc. Thus, the residual between the fair value of purchase consideration and all other separately identified and valued assets can be considered to be indicative of the fair value of the other assets combined.

Goodwill and Bargain Purchases

Goodwill is typically recognized in business combinations where the fair value of consideration exceeds the total fair value of identified tangible and intangible assets. To the extent the total fair value of identified tangible and intangible assets exceeds the purchase consideration, a bargain purchase results. Such bargain purchases require careful analysis from a Generally Accepted Accounting Principles ("GAAP") financial accounting perspective. In business combinations in which a bargain purchase results, GAAP requires that the purchaser reassess its fair value calculations to ensure that they are accurate and have fully considered all of the assets acquired and liabilities assumed. Instances of true bargain purchases are rare and should be supported by some other factors that are causing the seller to accept less than fair value for the combinations of assets and liabilities sold.

A bargain purchase is often best observed by calculating the implied internal rate of return based on the expected cash flows for the project(s), typically accomplished by solving for the required rate of return realized by the investor in the project. The investor invests the fair value of the consideration in return for the future cash flows of the project. In a bargain purchase scenario, the implied internal rate of return will exceed the market-based return for the project, as well as the weighted-average return on all assets acquired.

Application of Purchase Price Allocation to Acquisition of Assets

Major differences between the accounting requirements for a business combination and an asset acquisition, are set out in Table 1 below:

	Acquisition of a Business	Acquisition of an Asset
Goodwill	Goodwill or bargain purchase gain recognized.	
		No goodwill or bargain purchase gain recognized.
Initial measurement of assets and liabilities	Assets and liabilities acquired are accounted for at their fair values.	Assets and liabilities are assigned a carrying amount based on relative fair values.
Transaction Costs	Transaction costs are expensed.	Transaction costs are capitalized.
Contingent consideration	Contingent consideration (including royalty streams) is a financial instrument, and should be accounted for in accordance with IAS 39 Financial Instruments: Recognition and Measurement or IFRS 9 Financial Instruments.	Contingent consideration (including royalty streams) is not automatically classified as a financial instrument, and might be accounted for as a contingent liability/provision under IAS 37 <i>Provisions, Contingent Liabilities and Contingent Assets</i> or, in the case of royalty streams, may be determined to be executor in nature and outside of the scope of IAS 37.
Changes in the fair value of contingent consideration	After initial recognition at the acquisition date fair value, changes in the fair value of contingent consideration are recognized in profit or loss.	IFRS is not clear about the accounting approach to be followed for the movement in the fair value of contingent consideration for an asset acquisition. Depending on the circumstances, movements in the carrying amount of contingent consideration may be either: - Recognized in profit or loss, or - Capitalized as part of the asset

Conclusion

Purchase price allocations are a necessary part of financial reporting that follows transactions including acquisition of solar energy projects, and the proper methods and assumptions to be used quickly become complex. Always consult your auditor, specialized valuation consultant, and/or other appropriate professional counsel in implementing this or any other valuation guidance.